APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/521,282	03/07/2000	Jacques Belissent	SUN1P602	9227

22434   7590   05/22/2003

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EXAMINER
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ART UNIT	PAPER NUMBER
2143	

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL.**   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-25_ is/are pending in the application.

    4a) Of the above claim(s) _4_ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-3 and 5-25_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _07 March 2000_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _5,6,7_ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 1, 14 and 18 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating obviousness
            or nonobviousness.

4.   Claims 1-5, 11-12 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable

over US Patent No. 6,226,751 by Arrow et al in view of US Patent No. 5,809,331 by Staats et al.

        In claim 1 Arrow teaches about a method for defining a virtual domain in an electronic

messaging system, comprising (Fig 1):

        defining a virtual domain node corresponding to a real domain name server (Col 9, lines

25-35); and

associating a plurality of virtual domain attributes to the virtual domain node (Col 9, lines 20-35).

But does not teach about arranging the domain in a hierarchically organized directory wherein the hierarchically organized directory is a hierarchical structure that resembles a tree with one major branch at the top and many branches and sub-branches below.

Staats teaches about a method of searching and retrieving data arranging in a hierarchical structure (Col 1, line 60- Col 2, line 10).

It would have been obvious at the time of this invention for some one of ordinary skill to use a hierarchically organized directory to search and access domain information.

In an entity where there is a hierarchical structural layout of different entities, it is natural to organize the entities as a tree structure as in the case of Staats (Fig 1 and Fig 3) . This approach of hierarchical structure layout, facilitates searching and retrieving information and is well known in the computer art and used by all operating system to organized file. By organizing the entities in a hierarchical structure, it requires less time to organized, search and retrieve information which increase the efficiency of the operation

For claim 2, Arrow teaches about a method as recited in claim 1, wherein the plurality of virtual domain attributes include a designated virtual domain administrator, a designated virtual domain postmaster, a state of the virtual domain, and a set of allowed services for the virtual domain (Fig 7).

In claim 3, Arrow teaches about a method as recited in claim 2, wherein the state of the virtual domain node is selected from the list comprising: active, inactive (or suspended), and deleted (Col 8, lines 50-60).

In claim 5, Arrow teaches about a method as recited in claim 1, wherein the tree based hierarchy is a standard based directory information tree (DIT) that includes a plurality of directory entries each of which is associated with a higher level (parent) directory entry (Covered in claim 1).

In claim 11, Arrow teaches about a method as recited in claim 1, wherein the electronic messaging system is an email messaging system (Col 6, lines 55-65).

For claim 12, Arrow teaches about a method as recited in claim 1, wherein the electronic messaging system is a voicemail messaging system (Col 6, lines 55-65).

For claim 14, Arrow teaches about a computer-readable medium containing programming instructions for defining a virtual domain in an electronic messaging system, the computer-readable medium comprising computer program code devices configured to cause a computer to execute the operations of (Fig 1):

defining a virtual domain node corresponding to a real (non-virtual) domain in a hierarchically organized directory wherein the hierarchically organized directory is a hierarchical structure that resembles a tree with one major branch at the top and many branches and sub-branches below (Covered in claim 1); and

associating a plurality of virtual domain attributes to the virtual domain node (Col 9, lines 20-35).

In claim 15, Arrow teaches about a computer-readable medium containing programming instructions for defining a virtual domain in an electronic messaging system as recited in claim 10, wherein the plurality of virtual domain attributes include a designated virtual domain administrator, a designated virtual domain postmaster, a state of the virtual domain, and a set of

allowed services for the virtual domain and wherein the state of the virtual domain node is selected from the list comprising(Fig 7): active, inactive (or suspended), and deleted (Col 8, lines 35-67).

For claim 16, Arrow teaches about a computer-readable medium containing programming instructions for defining a virtual domain in an electronic messaging system as recited in claim 15, the computer-readable medium further comprising computer program code devices configured to cause a computer to execute the operations of (Fig 4):
defining a routing table based upon the segmented name space, wherein the routing table is used by a transfer agent to direct an appropriately addressed email message to a receiving user in the virtual domain (Col 3, lines 30-35).

In claim 17, Arrow teaches about a computer-readable medium containing programming instructions for defining a virtual domain in an electronic messaging system as recited in claim 16, the computer-readable medium further comprising computer program code devices configured to cause a computer to execute the operations of (Fig4, 404):

initially resolving a user name during a user name search operation at the higher hierarchical level and subsequently at the first hierarchical level such that in a multi-domain environment the search operation is performed as if the user name was part of a flat name space (Col 11, lines 35-45).

For claim 18, Arrow teaches about an electronic messaging system having a main host computer for transferring an incoming message between a sending subscriber and a receiving subscriber having an associated unique user name, comprising (Fig 1):

a messaging server coupled to the host computer arranged to receive the incoming message from the sending subscriber and arranged to forward the message to the receiving subscriber based upon the receiving subscriber's user name (Col 9, lines 10-35), (Fig 1);

a hierarchically organized directory coupled to the messaging server arranged to define a virtual domain node corresponding to a real (non-virtual) domain having associated with it a plurality of virtual domain attributes to the virtual domain node wherein the hierarchically organized directory is a hierarchical structure that resembles a tree with one major branch at the top and many branches and sub-branches below (Covered in claim 1);

In claim 19, Arrow teaches about an electronic messaging system as recited in claim 18, wherein the plurality of virtual domain attributes include a designated virtual domain administrator, a designated virtual domain postmaster, a state of the virtual domain, and a set of allowed services for the virtual domain (Fig 7).

For claim 20, Arrow teaches about an electronic messaging system as recited in claim 19, wherein the state of the virtual domain node is selected from the list comprising: active, inactive (or suspended), and deleted (Col 8, lines 50-60).

1.   Claim 6-10, 13 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,226,751 by Arrow et al. in view of US Patent No. 6,366,950 by Scheussler et al.

In claim 6, Arrow teaches about a directory database but fails to disclosed the limitation where the directory takes the form of a segmented name space. Scheussler teaches about a method in which the directory takes the form of a segmented name space (Col 6, lines 25-30).

It would have been obvious at the time of the invention for some one of ordinary skill to organize a translation database in a directory structure. A directory structure allows one the ability to organize complex database in to manageable parts. In this way, the time taken to traverse and maintain the database is reduce to a minimum.

In claim 7, a method as recited in claim 6, wherein the segmented name space includes a segmented name associated with a user that is segmented in such a way that the user is uniquely identified by a unique user name at a first hierarchical level and an associated domain name at a higher hierarchical level (Covered in claim 6).

For claim 8, a method as recited in claim 7, wherein during a user name search operation, the user name is initially resolved at the higher hierarchical level and subsequently at the first hierarchical level such that in a multi-domain environment the search operation is performed as if the user name was part of a flat name space (Covered in claim 6).

In claim 9, Arrow teaches about a method as recited in claim 8 further comprising:

defining a routing table based upon the segmented name space, wherein the routing table is used by a transfer agent to direct an appropriately addressed email message to a receiving user in the virtual domain (Col 6, lines 30-50).

For claim 10, Arrow teaches about a method as recited in claim 9, wherein the segmented name space is based upon the most direct path from the user name to the highest connected hierarchical level in the directory (Col 8, lines 50-60).

In claim 13, Arrow teaches about a directory database but fails to disclosed the limitation where the directory is a standard based directory is an LDAP based directory. Scheussler teaches

about a method in which the directory takes the form of a standard based directory is an LDAP

based directory (Col 9, lines 28-35).

It would have been obvious at the time of the invention for some one of ordinary skill to

use LDAP to reduce the overhead that is required to store information. The LDAP provides a

means where the database and its attributes can be stored and retrieved with less overhead when

compares to conventional directory. This allows smaller storage space and reduces cost for

memory.

In claim 21, an electronic messaging system as recited in claim 20, wherein the

hierarchically organized directory is an LDAP based directory information tree (DIT) that

includes a plurality of directory entries each of which is associated with a higher level (parent)

directory entry and wherein the directory takes the form of a segmented name space (Covered in

claims 6 &13).

For claim 22, Arrow teaches about an electronic messaging system as recited in claim 21,

wherein the user name is segmented in such a way that the user is uniquely identified by a unique

userid at a first hierarchical level and an associated domain name at a higher hierarchical level

(Col 9, lines 25-35).

In claim 23, Arrow teaches about an electronic messaging system as recited in claim 22,

wherein in order for the messaging server to forward the email message to the receiving

subscriber, the messaging server executes a user name search operation (Col 7, lines 55-67).

For claim 24, an electronic messaging system as recited in claim 23, wherein the user

name search operation comprises:

initially resolving the user name at a highest hierarchical level and subsequently at a

lowest hierarchical level in such a way that when the name search operation is executed in a

multi-domain environment, the search operation is performed as if the user name was part of a

flat name space (Covered in claim 6).

In claim 25, Arrow teaches about an electronic messaging system as recited in claim 24,

wherein the messaging server further includes:

a routing table defined by the directory based upon the resolved receiving subscriber's

user name that defines a path by which the email message is passed from the sending subscriber

to the receiving subscriber (Col 8, lines 50-60); and

a transfer agent arranged to direct the email message from the sending subscriber to the

receiving subscriber as defined by the routing table (Fig 5).

Conclusion

2.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

US Patent No. 6,434,600 by Waite et al teaches about a method and system for securely

delivering electronic mail to host having dynamic address.

US Patent No. 5,930,474 by Dunwoth et al teaches about an internet organizer for

accessing geographically and topically based information.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael S. A. Delgado whose telephone number is 703-305-

8057. The examiner can normally be reached on 8 AM - 4.30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David A Wiley can be reached on (703) 308-5221. The fax phone numbers for the

organization where this application or proceeding is assigned are 703-746-7239 for regular

communications and 703-746-7239 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

MD
May 16, 2003

DAVID WILEY
SUPERVISORY PATENT EXAMINER
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